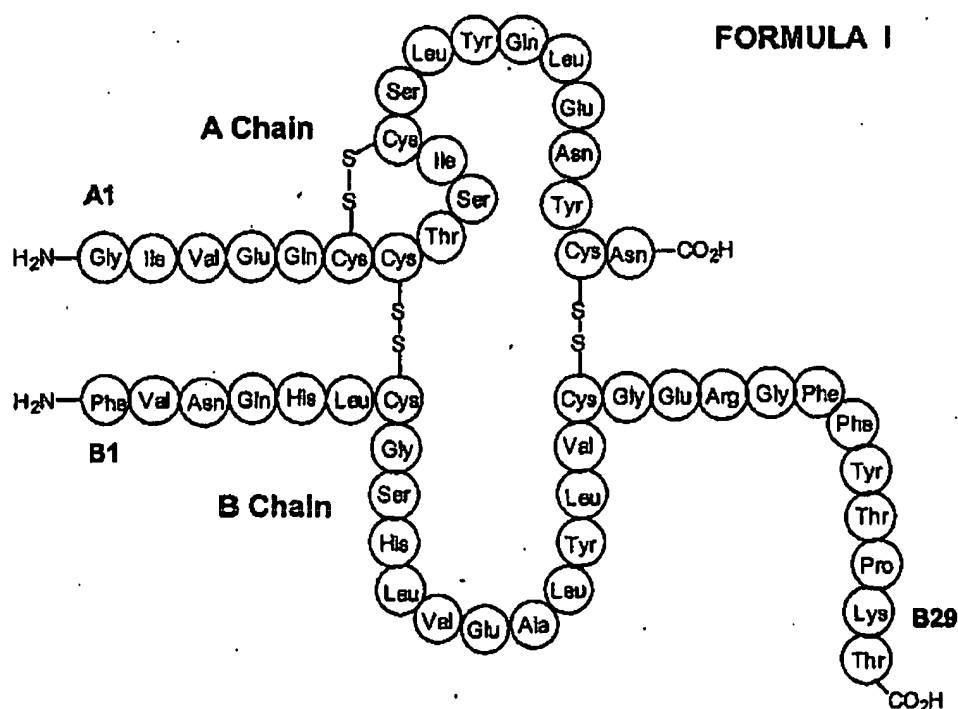


AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS

1. (Currently Amended) An insulin derivative comprising an insulin molecule and a reactive group for covalently bonding a blood component, said reactive group being selected from the group consisting an α,β -unsaturated carbonyl moiety, a succinimidyl-containing group and a maleimido-containing group.
2. (Previously Presented) The insulin derivative of claim 1, wherein the insulin molecule is of formula I:



and the reactive group is coupled to an amino acid of the insulin molecule at a position selected from the positions Gly A1, Phe B1 and Lys B29.

3. The insulin derivative of claim 1 ~~or 2~~, wherein the reactive group is a maleimido-containing group.

4. (Currently Amended) The insulin derivative of claim 1 ~~or 2~~, wherein the reactive group is 3-Maleimidopropionic acid (MPA).

5. (Currently Amended) The insulin derivative of claim 1 ~~any one of claims 1 or 4~~, wherein the reactive group is coupled to an amino acid of the insulin molecule via a linker.

6. (Currently Amended) The insulin derivative of claim 5, wherein said linker is selected from the group consisting of (2-amino) ethoxy acetic acid (AEA), ethylenediamine (EDA), amino ethoxy ethoxy succinimic acid (AEES), AEES-AEES, 2-[2-(2-amino)ethoxy]] ethoxy acetic acid (AEEA), AEEA-AEEA, $\text{-NH}_2\text{-(CH}_2\text{)}_n\text{-COOH}$ where n is an integer between 1 and 20 and alkyl chain (C1-C10) motif and combinations thereof.

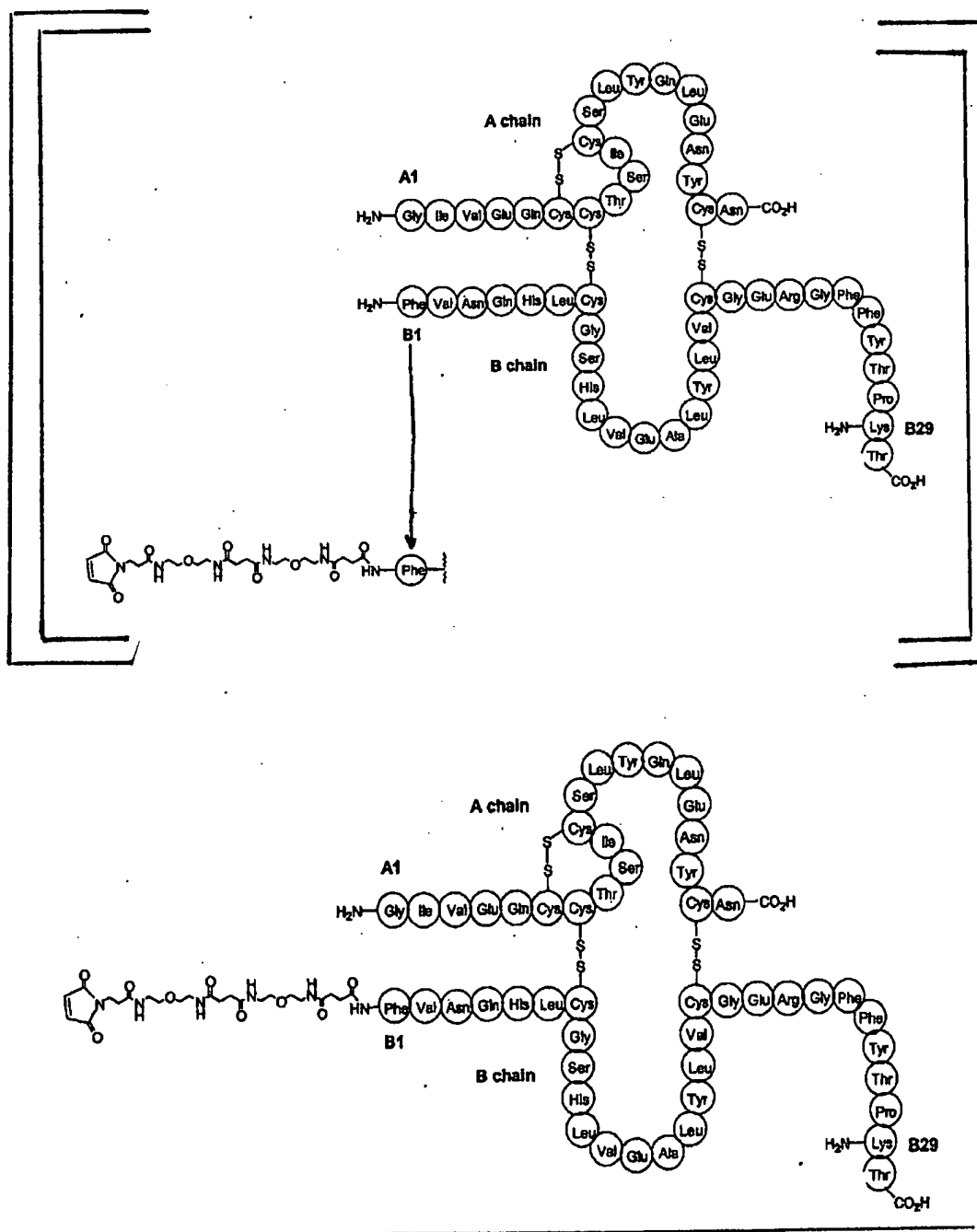
7. (Currently Amended) The insulin derivative of claim 6, wherein said alkyl chain (C₁-C₁₀) motif is one or more alkyl chains (C₁-C₁₀) saturated or unsaturated ~~in which could be incorporated~~ optionally including one or more oxygen, nitrogen or sulfur atoms.

8. (Previously Presented) The insulin derivative of claim 7, wherein said alkyl chain is selected from the group consisting of glycine, 3-aminopropionic acid (APA), 8-aminooctanoic acid (AOA) and 4-aminobenzoic acid (APhA).

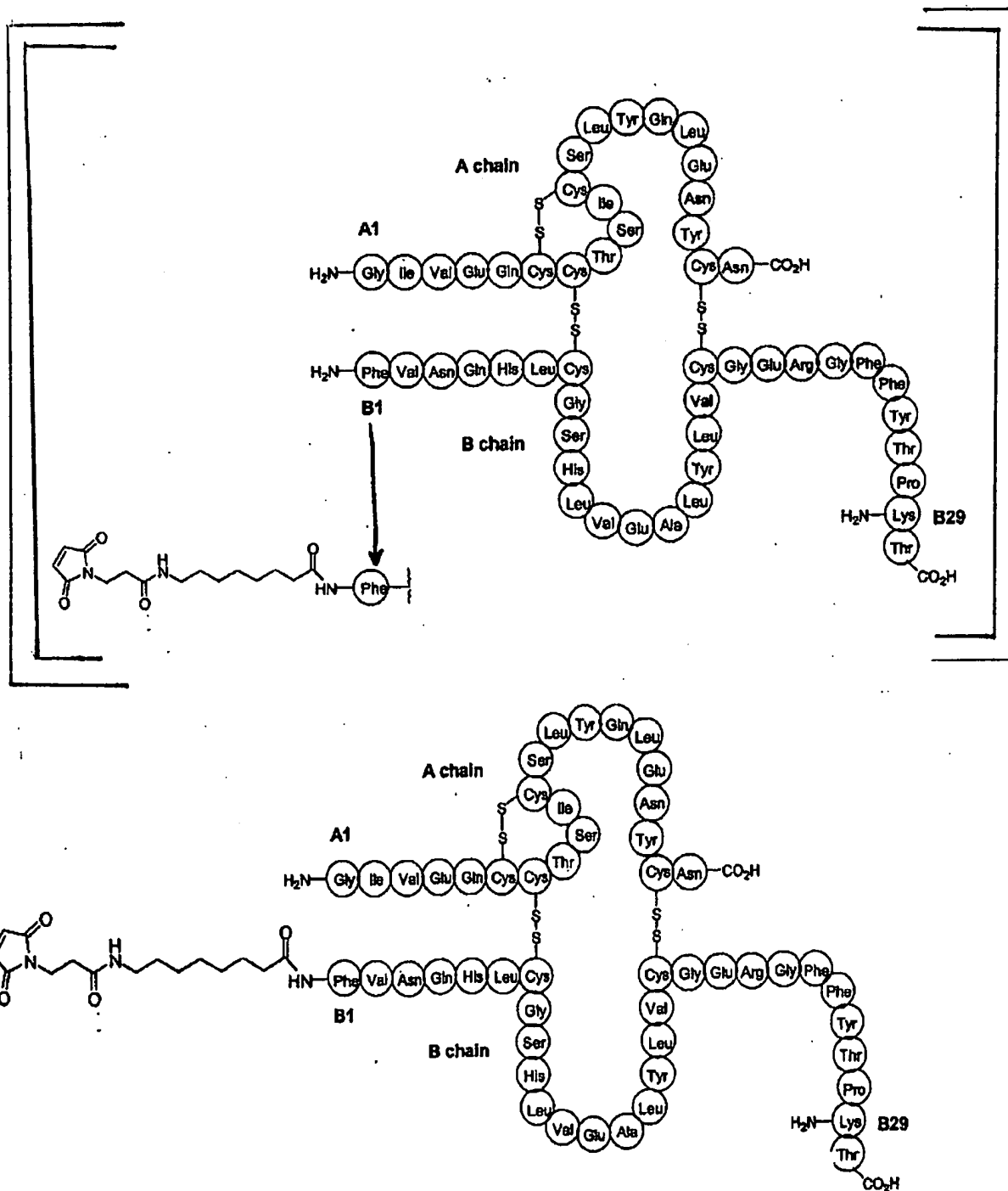
9. (Currently Amended) The insulin derivative of claim 6, wherein said ~~combination~~ linker is selected from the group consisting of AEEA-EDA, AEEA-AEEA and AEA-AEEA.

10. (Previously Presented) The insulin derivative of claim 6, wherein said linker is $\text{-NH}_2\text{-(CH}_2\text{)}_7\text{-COOH}$.

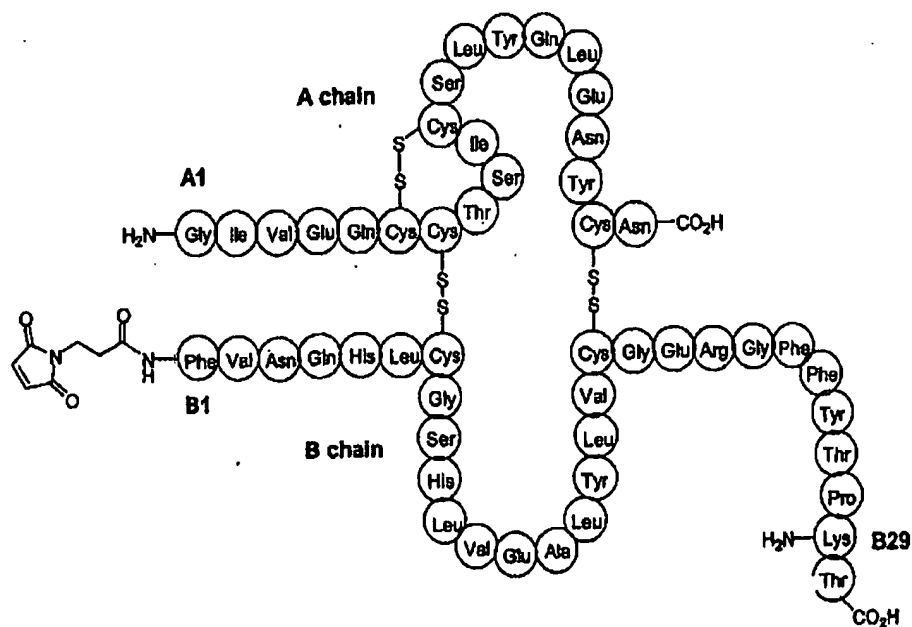
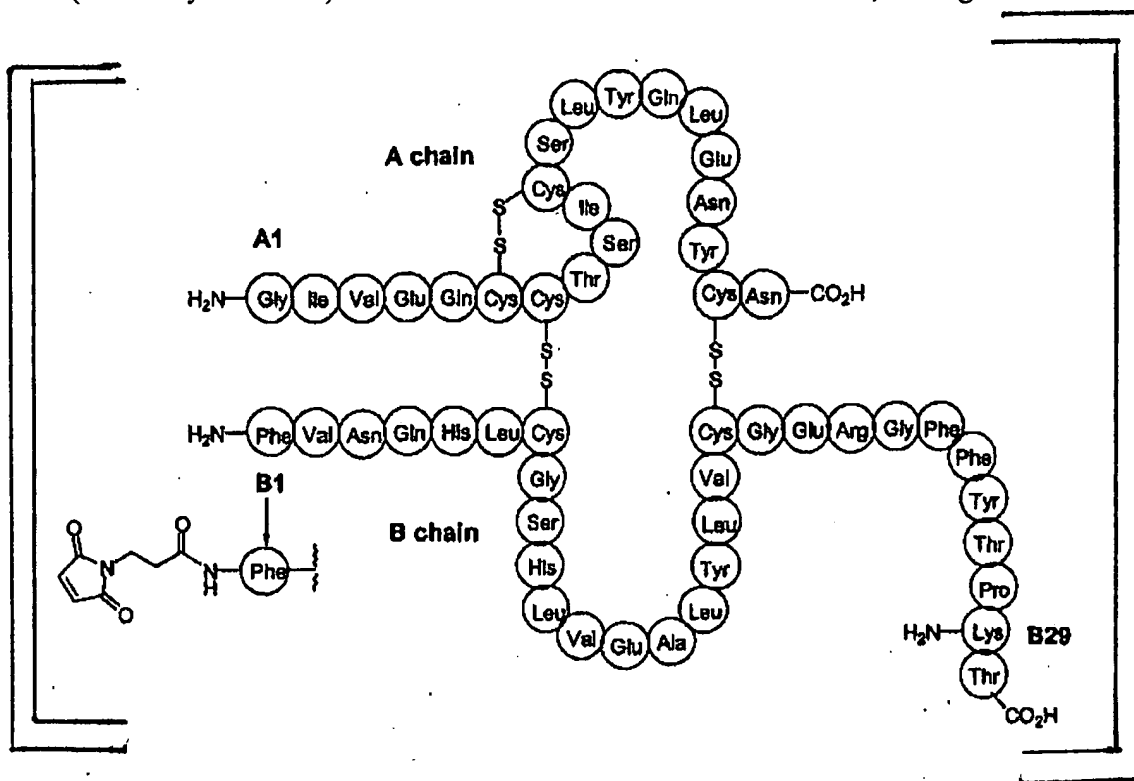
11. (Currently amended) The insulin derivative of claim 1 having the formula:



12. (Currently amended) The insulin derivative of claim 1, having the formula:



13. (Currently amended) The insulin derivative of claim 1, having the formula:



14. (Currently Amended) The insulin derivative of claim 1, wherein said ~~blood component is~~ derivative is covalently bonded to a blood protein.
15. (Currently Amended) The insulin derivative of claim 14, wherein said blood protein is ~~serum~~ albumin.
16. (Currently Amended) An insulin conjugate comprising an insulin derivative according to claim 1 ~~any one of claims 1 to 15~~, and a blood component, wherein the reactive group and the blood component are conjugated through a covalent bond ~~formed~~ between said reactive group and said blood component.
17. (Previously Presented) The insulin conjugate of claim 16, wherein the blood component is a blood protein.
18. (Previously Presented) The insulin conjugate of claim 17, wherein the blood protein is serum albumin.
19. (Previously presented) The insulin conjugate of claim 16, wherein said conjugate was formed *ex vivo*.
20. (Previously presented) The insulin conjugate of claim 19, wherein said blood component is recombinant albumin.
21. (Currently amended) A pharmaceutical composition comprising the insulin derivative of ~~any one of claims 1 to 15~~ claim 1 in association with a pharmaceutically acceptable carrier.
22. (Currently amended) A pharmaceutical composition comprising the insulin conjugate of ~~any one of claims 16 to 20~~ claim 16 in association with a pharmaceutically acceptable carrier.

23. (Currently amended) A method for treating a glycaemic-related disease or disorder in a subject suffering from said glycaemic-related disease or disorder, comprising administering the insulin derivative of ~~any one of claims 1 to 15~~claim 1 to said subject.

24. (Previously presented) The method according to claim 23, wherein said glycaemic-related disease is selected from the group consisting of diabetes of type I, diabetes of type II, gestational diabetes, cystic fibrosis, polycystic ovary syndrome and pancreatitis.

25. (Previously presented) The method according to claim 23, wherein the glycaemic-related disease is selected from the group consisting of diabetes of type I and diabetes of type II.

26. (Currently amended) A method for treating a glycaemic-related disease or disorder, comprising the administration of the insulin conjugate of ~~any one of claims 16 to 20~~claim 16.

27. (Previously presented) The method according to claim 26, wherein said glycaemic-related disease is selected from the group consisting of diabetes of type I, diabetes of type II, gestational diabetes, cystic fibrosis, polycystic ovary syndrome and pancreatitis.

28. (Previously presented) The method according to claim 26, wherein the glycaemic-related disease is selected from the group consisting of diabetes of type I and diabetes of type II.

29. (Currently amended) A method for treating a glycaemic-related disease or disorder in a patient, comprising the administration of administering the pharmaceutical composition of ~~any one of claims 21 and 22~~claim 21 to said patient.

30. (Previously presented) The method according to claim 29, wherein said glycaemic-related disease is selected from the group consisting of diabetes of type I, diabetes of type II, gestational diabetes, cystic fibrosis, polycystic ovary syndrome and pancreatitis.

31. (Previously presented) The method according to claim 29, wherein the glycaemic-related disease is selected from the group consisting of diabetes of type I and diabetes of type II.

32-37 (CANCELED)